

Article number **6018300002**

| Electrical data                         |           |                                                                                                                                                                 |
|-----------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated operating voltage                 | $U_e$     | 24 V DC, Reverse polarity protection, +25 %, -20 % PELV/SELV power supply unit                                                                                  |
| Rated insulation voltage                | $U_i$     | 75 V DC                                                                                                                                                         |
| Rated impulse withstand voltage         | $U_{imp}$ | 500 V                                                                                                                                                           |
| Rated conditional short circuit current |           | 100 A                                                                                                                                                           |
| No-load current                         | $I_0$     | ≤ 50 mA                                                                                                                                                         |
| Transponder frequency                   |           | 125 kHz                                                                                                                                                         |
| Risk time                               | $t_a$     | ≤ 50 ms                                                                                                                                                         |
| Time delay                              | $t_v$     | ≤ 2 s                                                                                                                                                           |
| Level of coding                         |           | high                                                                                                                                                            |
| Electromagnetic interference            |           | according to EN IEC 60947-5-3 and EN 61326-3-1                                                                                                                  |
| Emergency operation function            |           | activated / 20 min.                                                                                                                                             |
| Utilization category                    |           | DC-13                                                                                                                                                           |
| <b>Outputs <math>Q_1, Q_2</math></b>    |           |                                                                                                                                                                 |
| Voltage level                           |           | according to Typ 3 EN 61131-2                                                                                                                                   |
| Switching element function              |           | PNP NO (OSSD)                                                                                                                                                   |
| Rated operating current                 | $I_e$     | 250 mA at 25 °C                                                                                                                                                 |
| Leakage current                         | $I_r$     | ≤ 1 mA DC                                                                                                                                                       |
| Switching elements                      |           | Sustained short-circuit and overload protection                                                                                                                 |
| Voltage drop                            | $U_d$     | ≤ 3 V                                                                                                                                                           |
| Type of short circuit protection        |           | Current-limited, digital                                                                                                                                        |
| <b>Outputs AUXD/AUXL</b>                |           |                                                                                                                                                                 |
| Switching element function              |           | AUXL: PNP make-contact element (normally open), off when guardlock is active<br>AUXD: PNP make-contact element (normally open), off when safety guard is closed |
| Rated operating current                 | $I_e$     | 50 mA at 25 °C                                                                                                                                                  |
| Switching elements                      |           | Sustained short-circuit and overload protection                                                                                                                 |
| Voltage drop                            | $U_d$     | ≤ 1,5 V                                                                                                                                                         |
| Type of short circuit protection        |           | Current-limited, digital ( clocking)                                                                                                                            |
| <b>Electromagnet guard locking</b>      |           |                                                                                                                                                                 |
| Power consumption                       |           | During state change: ≤ 5,25 W for ≤ 35 ms                                                                                                                       |

| <b>Mechanical data</b>                                           |            |                                                                         |
|------------------------------------------------------------------|------------|-------------------------------------------------------------------------|
| Enclosure                                                        |            | Thermoplastic, glass-fibre reinforced (UL 94-V0)                        |
| Cover                                                            |            | Thermoplastic, glass-fibre reinforced (UL 94-V0)                        |
| Mounting for separate actuator/<br>transmission of locking force |            | Stainless steel / Thermoplastic, glass-fibre reinforced (UL 94-V0)      |
| Actuation                                                        |            | separate actuator                                                       |
| Minimum actuating radius                                         | $R_{\min}$ | see actuator data sheet                                                 |
| Approach speed                                                   | $v_{\max}$ | 0,5 m/s                                                                 |
| Switching frequency                                              |            | ≤ 10 / min.                                                             |
| Pull-out force                                                   |            | ≤ 20 N                                                                  |
| Guard locking principle                                          |            | bistable                                                                |
| Release                                                          |            | a) Electromagnet<br>b) Auxiliary release from front and rear side       |
| Locking force                                                    | $F_{Zh}$   | 3000 N (EN ISO 14119)                                                   |
| Ambient air temperature                                          |            | -10 °C ... +60 °C                                                       |
| Storage temperature                                              |            | -25 °C ... +70 °C                                                       |
| Mechanical life                                                  |            | 8 x 10 <sup>5</sup> switching cycles                                    |
| Mounting                                                         |            | Straight screw-on position: 2 x M4<br>Turned screw-on position: 3 x M4  |
| Connection type                                                  |            | Cable with M12 male connector, 8-pin, A-coded                           |
| Weight                                                           |            | ≈ 0,350 kg                                                              |
| Mounting position                                                |            | any                                                                     |
| Degree of protection according to<br>EN 60529                    |            | IP66<br>IP67<br>IP69 (Protect cable connectors from direct water jets.) |
| Degree of protection according to NEMA                           |            | Type 1                                                                  |
| Protection class                                                 |            | III                                                                     |
| Installation altitude                                            |            | ≤ 4000 m NHN                                                            |
| Vibration                                                        |            | (each axis)                                                             |
| Test standard                                                    |            | IEC 60068-2-6                                                           |
| Frequency range                                                  |            | 10 - 55 Hz                                                              |
| Amplitude                                                        |            | 1 mm                                                                    |
| Shock                                                            |            | (each axis)                                                             |
| Test standard                                                    |            | IEC 60068-2-27                                                          |
| Pulse shape                                                      |            | Half-sine                                                               |
| Peak acceleration                                                |            | 30 g                                                                    |
| Pulse duration                                                   |            | 11 ms                                                                   |

| Safety data Door monitoring |           |                |
|-----------------------------|-----------|----------------|
| up to PL                    | e         | EN ISO 13849-1 |
| Category                    | 4         |                |
| PFH <sub>D</sub>            | 2,9E-09   | DIN EN 62061   |
| SIL CL                      | 3         |                |
| SFF                         | 98,02 %   | IEC 61508      |
| MTTF <sub>d</sub>           | 684 years | EN ISO 13849-1 |
| DC                          | 95,66 %   |                |

| Safety data Guard locking |           |                |
|---------------------------|-----------|----------------|
| up to PL                  | e         | EN ISO 13849-1 |
| Category                  | 3         |                |
| PFH <sub>D</sub>          | 7,47E-10  | DIN EN 62061   |
| SIL CL                    | 3         |                |
| SFF                       | 98,28 %   | IEC 61508      |
| MTTF <sub>d</sub>         | 730 years | EN ISO 13849-1 |
| DC                        | 96,07 %   |                |

| General safety data |                                      |
|---------------------|--------------------------------------|
| Service life        | 20 years                             |
| B10d                | 8 x 10 <sup>5</sup> switching cycles |

| Standards |                                                        |
|-----------|--------------------------------------------------------|
|           | DIN EN ISO 14119                                       |
|           | EN 60947-1, EN 60947-5-2 , EN 61326-3-1                |
|           | EN ISO 13849-1, EN 62061, EN 60947-5-3, EN ISO 13849-2 |
|           | EN 60204-1, ETSI EN 301489-1, ETSI EN 300330-1         |

| EU Conformity    |                                                                              |
|------------------|------------------------------------------------------------------------------|
| until 2027-01-19 | according to directive 2006/42/EG (Safety-of-Machinery-Directive)            |
| from 2027-01-20  | acc. to regulation (EU) 2023/1230 (Machinery Regulation)                     |
|                  | according to directive 2011/65/EU; 2015/863 (RoHS III)                       |
|                  | according to directive 2014/53/EU (RED)                                      |
|                  | according to directive 2012/19/EU (EU-WEEE II);<br>WEEE-Reg. No. DE 50560927 |

| Approvals |                                                   |
|-----------|---------------------------------------------------|
|           | TÜV Süd, cUL <sub>US</sub> (class 2 Power source) |
|           | FCC ID: 2ABA6BD1                                  |
|           | IC: 11535A-BD1                                    |

| Notes |  |
|-------|--|
|       |  |